

**Notice of Allowability**

Application No.

09/675,920

Examiner

Thierry L. Pham

Applicant(s)

ZIMMERMAN ET AL.

Art Unit

2625

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to authorized Examiner's amendment dated 3/14/07.
2. ☒ The allowed claim(s) is/are Claims 1-3, 5-9, and 16-18 are allowed; renumbered as claims 1-11.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

Art Unit: 2625

### DETAILED ACTION

- This action is responsive to the following communication: authorized Examiner's amendment dated 3/14/07.
- As the results of an authorized Examiner's Amendment, claims 10-15 have been canceled; claims 1-3, 5-9, and 16-18 are allowed.

### *Allowable Subject Matter*

Claims 1-3, 5-9, and 16-18 are allowed; renumbered as claims 1-11.

The following is an examiner's statement of reasons for allowance: The combined cited prior arts (*US 6587140 to Young No*; *US 6538762 to Terashima et al*; *US 5930553 to Hirst et al*) of record teach a printing system having a host device, an office machine (e.g. printer), and a PC card having an printer controller integrated circuit for formatting and processing print data, but the combined cited prior arts of record fail to teach and/or suggest "printing software having an automatic update module that automatically downloads an updated version of printer controller firmware from a source external of the PC card to the printer controller of the PC card, and wherein the printer controller performs printer controller functions when the printer controller firmware is executed by the printer controller and in combinations of other features" as amended in independent claims 1, 5, and 8 (renumbered as claims 1, 4, and 7 respectively). The examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of prior arts that teaches the above limitations and in combinations of other features cited in claims 1, 5, and 8 (renumbered as claims 1, 4, and 7 respectively).

### *Conclusion*

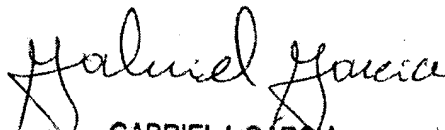
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

Art Unit: 2625

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thierry L. Pham

  
GABRIEL I. GARCIA  
PRIMARY EXAMINER

### EXAMINER'S AMENDMENT

An extension of time under 37 CFR 1.136(a) is required in order to make an examiner's amendment which places this application in condition for allowance. During a telephone conversation conducted on 3/14/07, the application has been amended as follows: Michael Chu requested an extension of time for 1 MONTH(S) and authorized the Director to charge Deposit Account No. 23-1925 the required fee of \$120 for this extension and authorized the following examiner's amendment. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael Chu on 3/14/07.

Please amend the following claims:

1. (Currently amended) A printing system comprising
  - a) a host device for executing programs;
  - b) an office machine having a print engine for receiving print engine ready data and based thereon for rendering images and a PC card slot for receiving PC cards; wherein the office machine does not have any printer controller circuit;
  - c) a PC card for removably coupling with the PC card slot of the office machine and for coupling with the host device, the PC card having a printer controller integrated circuit for providing substantially all printer controller

functions for the office machine, the printer controller integrated circuit for receiving printer controller ready data from the host device and based thereon for generating print engine ready data; , wherein the office machine requires the PC card with printer controller to be coupled thereto to render images; , and wherein the printer controller may be replaced or upgraded by a user without intervention of the manufacturer of the office machine; and

- d) printing software having an automatic update module that automatically downloads an updated version of printer controller firmware from a source external of the PC card to the printer controller of the PC card, and wherein the printer controller performs printer controller functions when the printer controller firmware is executed by the printer controller to the printer controller from a source an updated version of printer controller firmware.

5. (Currently amended) An office machine comprising:

- a) a laser print engine for rendering images; and
- b) a PC card slot coupled to the laser print engine for receiving a removable PC card that includes a printer controller for controlling substantially all printer controller functions of the office machine; , wherein the PC card slot is utilized to transfer output from the printer controller to the laser print engine; , wherein the office machine requires the PC card with printer controller to be coupled thereto to render images; , and wherein a defective printer controller may be replaced by an operational printer

controller or an out-dated printer controller may be upgraded with a new printer controller by removing the PC card with the defective or old printer controller from the office machine and by inserting a new PC card with the operational or new printer controller into the office machine; and

- c) printing software having an automatic update module that automatically downloads an updated version of printer controller firmware from a source external of the PC card to the printer controller of the PC card, and wherein the printer controller performs printer controller functions when the printer controller firmware is executed by the printer controller ~~to the printer controller from a source an updated version of printer controller firmware.~~

8. (Currently amended) A removable PC card for removably coupling with corresponding card slot in a laser printer comprising:
- a) a printer controller integrated circuit for controlling substantially all printer controller functions of the printer; and
- b) a connector having a print engine ready data interface for coupling to the laser office machine and selectively receiving print engine ready data therefrom; <sub>1</sub> wherein the PC card is adapted for insertion into a corresponding PC card slot in the laser printer and wherein the printer controller integrated circuit ~~may~~ executes printer controller firmware to provide printer controller functions to the laser printer when coupled thereto; <sub>1</sub> wherein a defective printer controller may be replaced by an operational printer controller or an out-dated printer controller may be upgraded with a new printer controller

by removing the PC card with the defective or old printer controller from the laser printer and by inserting a new PC card with the operational or new printer controller into the laser printer; ~~and wherein the printer controller receives automatically updated printer controller firmware and~~

c) printing software having an automatic update module that automatically downloads an updated version of printer controller firmware from a source external of the PC card to the printer controller integrated circuit of the PC card.

10-15. (Canceled).